AGENDA ITEM III A 1

PROPOSED NEW ACADEMIC PROGRAM

L. E. FLETCHER TECHNICAL COMMUNITY COLLEGE

ASSOCIATE OF APPLIED SCIENCE IN NAUTICAL SCIENCE

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BACKGROUND INFORMATION

L. E. Fletcher campus of the Louisiana Technical College (LTC) was re-designated a "Technical/Community College" by the Board of Regents on June 26, 2003. The College serves Assumption, Lafourche, and Terrebonne parishes; it has offered an exceptionally successful program in marine operations since 1981. Since 1986, the physical campus of Fletcher has included the Louisiana Marine and Petroleum Institute (LAMPI).

The College proposes to offer an associate degree program so that those with expertise in the field of nautical science, in addition to students who desire employment in the marine industry, may earn academic credit.

STAFF SUMMARY

1. Curriculum

Students pursuing this degree organize their coursework around general education requirements augmented by additional math and computer literacy requirements (21 credit hrs.). Students then complete seven courses in Core Competencies (24 hrs.), followed by Advanced Topics courses (15 hrs.) for a total of 60 credit hours.

a.	**Component I: General Education**	**Credit Hours**
	College Algebra or Equivalent	3
	Mathematics Elective	3
	English Composition I	3
	Social Science Elective	3
	Humanities Elective	3
	Science Elective	3
	Computer Literacy /Elective	3
		21

b. Component II: Core Competencies

Seamanship 1	3
Seamanship 2	3
Marlinspike	2
Survival Craft	1
Basic Safety Training	1
Electronic Navigation	2
Seamanship Experience or Coursework Sea-time	12
	24

c. Component III: Advanced Topics

Automatic Radar Plotting Aids (ARPA)	2
Bridge Resources Management	1
Advanced Firefighting	2
Emergency Medical Care	1
River Piloting and Navigation	3
Marine Meteorology	3
Ship Construction	3
Ship Power Plants	3
Celestial Navigation	5
Maritime Law	3
Cargo Operations	3
Principles of Logistics and Transportation	3
Business of Shipping	3
	Select 15

TOTAL = 60 credit hours

The curriculum will prepare individuals with high school diplomas to obtain a minimal United States Coast Guard (USCG) marine operator's license upon completion of the program. To obtain USCG licenses, students must acquire the technical training and required sea-time in Component II of the curriculum.

The proposed program will also offer individuals who already possess USCG licenses an opportunity to obtain an associate-level degree. These individuals will receive up to 24 hours of credit in the Core Competencies (Component II), depending upon experience and licenses; they will be required to take the general education and advanced topics courses.

2. Need

The United States Coast Guard (USCG) determines the criteria for the licensed operation of marine vessels by vessel type and size categories based upon an applicant's sea-time experience, coursework, and examination scores. Mate and Master licenses exist at various levels, depending

on experience and training. According to the USCG, "evidence of service, and in some cases evidence of approved training, must be presented to establish service qualifications for individuals seeking qualified ratings."

All entities associated with maritime operations have indicated that academic credentials should now become a requirement for professionals in the industry. Good boating skills and on-deck experience are no longer considered sufficient. An associate degree will upgrade the credibility of mariners and increase professionalism in the industry. The proposal indicates that having a degree in nautical science will facilitate both employment and advancement within the field and should ensure that captains receive remuneration appropriate to their level of skill and responsibility.

a. Legislative Support

Senate Resolution 49, 2002 Regular Session, "urged and requested the Board of Regents to address the establishment of graduate, undergraduate and continuing education programs in Maritime and Intermodal Transportation." The proposed associate-level program would fulfill this request.

b. Marine Industry Support

Industrial support for the development of the proposed program was provided by a marine operations' employee development director, who indicated that mariners are now being required to obtain more training and formal coursework to advance to the mate/master/officer level. The existing maritime schools are all out-of-state; hence, attendance for Louisiana residents would be prohibitively expensive. Additionally, lack of formal course options has resulted in USCG licensing limited to smaller vessels, which constrains advancement and restricts remuneration.

c. Maritime Professional Support

i. Recent legislative changes have affected river pilots in Louisiana. The Marine Pilots' Institute, which represents river pilots, has requested the development of an associate degree program to provide appropriate training and professional credentials for their unique field of marine operations. A document from the Institute indicated that while the number of marine pilots is expected to remain constant for ten years, one-fourth of these commissioned pilots will retire within the next few years; new pilots will be needed to replace them. Roughly three hundred individuals are expected to be interested in applying for State Commissioned Pilot status over the coming ten-year period. The Institute projects that about half of those seeking State Commissioned Pilot status will have interest in an associate level program in Maritime Studies/Nautical Science in order to enhance their likelihood of selection for commission. It is also anticipated that about one-fourth of all active State Commissioned Pilots have a personal interest in continuing their education and would enroll in courses

offered in a relevant associate degree program. Ten percent of all active State Commissioned Pilots are likely to complete such an associate degree.

ii. Other mariners are represented by The New Orleans-Baton Rouge Steamship Pilots Association (NOBRA), which indicated its support of the proposed program in a letter which stated that "A large majority of vessels, both ships and boats, inland and offshore, are equipped with computers, electronic navigation and other sophisticated equipment. The mariner in today's merchant marine has an ever increasing need for continuing education and this type of specialized maritime degree is a much needed next step in our logical progression towards professional, educated and skilled mariners."

d. Uniqueness of offering

If approved, the Associate of Applied Science in Nautical Science will capitalize upon the unique resources located at the LAMPI facility and will position L. E. Fletcher as one of the few colleges along the Gulf Coast to offer any type of maritime degree program. Currently, this type of training is available at the STAR Center in Dania, Florida, and Texas Maritime Academy at Texas A&M at Galveston.

The staff observes that academic programs for training students for roles in the maritime industry include the institutions listed below as well as private organizations:

U.S. Merchant Marine Academy
State University of New York Maritime
Maine Maritime Academy
California Maritime Academy

3. Students

The proposed program targets two groups of students. For high school graduates without USCG licenses or marine experience, the adequate sea-time and information necessary for success on USCG licensure examinations will be embedded in Component II coursework (see above). Upon completion of the program, graduates with appropriate scores on the USCG examination will receive a 100 Ton Master Operator of Uninspected Passenger Vessel (OUPV) license which qualifies them to captain offshore supply and crew boats. (The majority of the vessels operating in Louisiana's coastal waters fall into the 100 ton category.)

The proposed program will also provide individuals employed in the inland and offshore maritime industry an opportunity to obtain an associate degree. These students will receive credit for previously acquired USCG licenses and documented sea-time. Students will be able to select advanced courses to suit their occupational objectives.

When graduates from either group of students have adequate experience operating various categories of marine vessels, they will become eligible for upper-level vessel operating licenses and positions as vessel managers, safety coordinators, port captains or harbor masters. With adequate experience in the marine towing industry and successful completion of another USCG examination, these graduates could also become eligible for a recently developed USCG Master license as tugboat captains.

The proposal indicates that the projected enrollment figures shown below represent 50% of the estimated demand.

	Year One	Year Two	Year Three	Year Four	Year Five
Enrollment	10	25	33	33	33
Graduates	0	8	10	11	12

The staff notes that if the proposed program is approved, the advantages of expanding the availability of the degree program to adult learners via distance learning are great. The pool of students interested in the program if courses are available on-line would be greatly increased with the addition of adult learners presently employed in the marine industry, many of whom have Internet access from their homes or aboard vessels during "off" times. The institution has indicated an interest in developing on-line offerings if the A.A.S. in Nautical Science is approved; issues of resources could be a constraint. The institution has also indicated that it would be open to collaboration with interstate institutions which offer similar programs in developing course offerings available through distance learning.

4. Faculty

Currently, there are two faculty associated with LAMPI: an instructor with an A.A.T. in Occupational Education, and the Division Chair, who possesses a B.S. in Mechanical Engineering and thirty-three years of previous service in the chemical industry. Both are USCG-licensed and will teach the initial Nautical Science offerings if the proposed program is approved. Faculty at Fletcher have credentials consistent with SACS-COC principles of accreditation. (Credentials are on file in the Office of Academic Affairs.) The College projects a need to hire one additional new full-time faculty in the second year as well as adjuncts who will teach in specialty areas.

5. Library

In compliance with SACS-COC standards, the College is in the process of developing a library adequate to meet its new mission as a Technical Community College. Nautical Science will be included in its collection development. It is estimated that $13,000 will be needed over five years to enhance nautical science holdings at L.E. Fletcher.

The College has also become a member of the LOUIS library network (as of July 2004), which provides further excellent support. Students also have access to the Allen J. Ellender Memorial

Library on the Nicholls State University (NSU) campus, eighteen miles away, and to the collections at the local Terrebonne Parish Library. Internet access is available at LAMPI facilities.

6. Facilities/Equipment

Fletcher Technical Community College's Marine Operations programs are currently held at the Louisiana Marine Petroleum Institute, located at 331 Dickson Road in Houma. Because of the similarity of the courses in both programs, the College plans to house the Nautical Science program at LAMPI. The facility has classrooms, seamanship skills labs, a radar lab and office space available for use by the proposed program. Additional equipment, projected at $5,000, will be needed within the first two years of program operation for a few of the advanced courses.

7. Administration

The proposed program will be administered by the Marine Operations Department; the institution does not anticipate that the proposed program will affect its current administrative structure. It should be noted that an Advisory Council with representatives of the maritime industry as well as mariners in different categories has participated in the development of the proposal. The Council will continue to offer guidance and assistance as the program develops.

8. Accreditation

This program is not eligible for any specific programmatic accreditation. As part of its entire range of degree offerings, this program will be part of Fletcher's application to SACS/CoC for institutional accreditation. The College plans to submit its SACS/CoC application in February, 2005. Some courses within the program will be approved by the USCG National Maritime Center.

9. Budget

The College projects a need for an additional full-time instructor and so will request additional state appropriations. Cost and revenue figures are as follows. **The figures below represent only new (not recurring) costs and revenues for each year:**

Costs	Year One	Year Two	Year Three	Year Four
Faculty		$ 45,000	$ 1,800	$ 1,872
Supplies	3,000	3,000		
Equipment	2,000	3,000		
Library	3,000	1,000		
TOTAL	**$8,000**	**$52,000**	**$1,800**	**$1,872**

The College recently was permitted by the Legislature to raise its tuition to $32 per credit hour; this figure is scheduled to rise over the next three years to a minimum of $50 per credit hour. It was also given the authority to raise tuition to the annual median in Louisiana for community college tuition (approx. $65 per credit hour).

Revenues	**Year One**	**Year Two**	**Year Three**	**Year Four**
State	$ 5,000	40,000		
Tuition, Fees	3,000	12,000	1,800	1,872
	$ 8,000	**$ 52,000**	**$ 1,800**	**$ 1,872**

Consequently, the College projects that this program will likely be self-sustaining by its third year of implementation.

STAFF ANALYSIS

The proposed program will be a unique offering in the state and one of only a few similar programs in the country. Given Louisiana's substantial marine industry, need for the program is well-documented. Student interest is likely. The College has provided a reasonable plan for acquiring additional faculty as needed. Library resources are developing; adequate resources will be available for students when the program is implemented. Facilities are adequate for implementation. Administrative plans are reasonable. Program accreditation is not an issue. The budget is reasonable.

Given that the College is in the process of hiring faculty and developing a library, conditional approval with stipulations for required reports as indicated in the motion below is appropriate. The staff encourages the establishment of relationships between FTCC and the University of New Orleans (UNO) and the Louisiana Universities Marine Consortium (LUMCON), as appropriate. The staff also encourages FTCC to investigate possible collaboration with other institutions in developing on-line course offerings.

The staff wishes to compliment the faculty and staff of L. E. Fletcher Technical Community College (FTCC) for responding in an innovative way to the needs of Louisiana's maritime industry and citizens.

STAFF RECOMMENDATION

The staff recommends that the Academic and Student Affairs Committee grant conditional approval for the proposed Associate of Applied Science in Nautical Studies program (CIP 49.0309) at L. E. Fletcher Technical Community College, to be implemented beginning January, 2005, with two stipulations:

1. ***By March 15, 2005, and every six months thereafter until SACS/CoC action has been taken, the College shall inform the Commissioner of Higher Education of the status of its application to SACS/CoC for candidacy;***

2. ***By September 1, 2005, the College shall submit a report to the Commissioner of Higher Education which documents the College's progress in addressing the following:***

    a. ***Hiring one additional qualified full-time faculty for the program;***
    b. ***Developing its library to meet SACS-COC standards;***
    c. ***Acquisition of needed equipment; and***
    d. ***Establishment of appropriate curricular relationships with UNO and LUMCON.***